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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/924,781

08/09/2001

Motoyoshi Sekiya

1095.1191

4352

21171

7590

09/22/2004

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EXAMINER

BELLO, AGUSTIN

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/924,781

Applicant(s)

SEKIYA ET AL.

Examiner

Agustin Bello

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiyama (U.S. Patent No. 5,883,735) in view of Terahara (U.S. Patent No. 6,647,211).

Regarding claims 1, 9, and 10, Sugiyama teaches a sending unit including: supervisory signal sending control means (e.g. means within End Office A in Figure 13) for controlling the sending of a supervisory signal (e.g. "CM" in Figure 13) for having supervisory control of optical communication and a drive supervisory signal (e.g. carrier signal sent to the amplifiers from which the drive of the amplifier is set) for controlling the driving of an optical fiber amplifier for performing optical amplification by using a non-linear optical phenomenon in an optical fiber (e.g. result of erbium doping of the amplifier); and a receiving unit including: the optical fiber amplifier (reference numeral 11 in Figure 14), drive control means (reference numeral 24 in Figure 14) for receiving the drive supervisory signal and for controlling the driving of the optical fiber amplifier, and stop signal sending means (reference numeral 33 in Figure 14) for sending the stop signal to the sending unit after the optical fiber amplifier being driven. Sugiyama differs from the claimed invention in that Sugiyama fails to specifically teach a sending stop means for receiving a stop signal and for stopping the sending of the drive supervisory signal. However, one skilled in the art would clearly have recognized that the "End

Office A" shown in Figure 13 would likely have had a means for receiving the response signal generated at the amplifier and a control means for controlling the sending of the supervisory signals. Furthermore, Terahara in the same field of optical communication, teaches it is well known in the art to include a receiving and supervisory signal control means at an end office for receiving (reference numeral 15 in Figure 1) and controlling supervisory signals (reference numeral 14 in Figure 1). One skilled in the art would have been motivated to include a receiver and control circuit such as that taught by Terahara in order to receive and control the supervisory signal. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include a sending stop means for receiving a stop signal (e.g. receiver in end office) and for stopping the sending of the drive supervisory signal (e.g. supervisory signal controller).

Regarding claim 2, Sugiyama differs from the claimed invention in that Sugiyama fails to specifically teach that the supervisory signal sending control means sets the transmission rate of the drive supervisory signal to a small value and sends the drive supervisory signal so that the drive supervisory signal can be received in a state in which the optical fiber amplifier is not operating. However, decreasing the transmission rate of a signal is a well known method for increasing the likelihood of signal reception in a faulted system. One skilled in the art would have been motivated to decrease the transmission rate of the drive supervisory signal in order to overcome the non-operational amplifier. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to set the transmission rate of the drive supervisory signal to a small value in order to overcome the inoperative amplifier.

Regarding claims 3, 4, 6, and 7, Sugiyama differs from the claimed invention in that Sugiyama fails to specifically teach the types of sources or transmission method claimed.

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However, transmitting signals via single or plurality transmitters at different data rates or different wavelengths is well known in the art. Transmitters capable of functioning at a variety of rates and wavelengths are well known in the art. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include those types of transmitters in the system of the combination of Sugiyama.

Regarding claim 5, Sugiyama teaches wherein the supervisory signal sending control means sets the wavelength of the drive supervisory signal to a value being within the range of an empty band in a transmission band for a main optical signal and sends the drive supervisory signal (inherent in that the carrier signal occupies its own wavelength within the range of an empty band since an overlap into an occupied band would cause destruction of the signal).

Regarding claim 8, Sugiyama teaches that the supervisory signal sending control means amplifies only the drive supervisory signal and sends the drive supervisory signal so that the drive supervisory signal can be received in a state in which the optical fiber amplifier is not operating (column 5 lines 30-35).

Conclusion

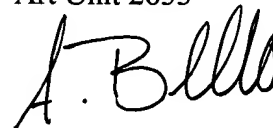
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Agustin Bello
Examiner
Art Unit 2633

A handwritten signature in black ink, appearing to read "A. Bello", written over the printed name and title.

AB